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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,935	03/01/2002	Shunpei Yamazaki	740756-2447	8560
31780	7590	08/19/2004	EXAMINER	
ERIC ROBINSON PMB 955 21010 SOUTHBANK ST. POTOMAC FALLS, VA 20165			BAUMEISTER, BRADLEY W	
			ART UNIT	PAPER NUMBER
			2815	

DATE MAILED: 08/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

10/084,935

Applicant(s)

YAMAZAKI ET AL.

Examiner

B. William Baumeister

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--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 22 January 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☒ A Notice of Appeal was filed on 26 January 2004. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
(a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ they raise the issue of new matter (see Note below);
(c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☐ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See attachment.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection. *BWB 8/17/04*
7. ☒ For purposes of Appeal, the ^{arguments} proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____

Claim(s) objected to: _____

Claim(s) rejected: 1-34

Claim(s) withdrawn from consideration: _____

8. ☐ The drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☒ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). 12/19/2004. *BWB 8/18/04*
10. ☐ Other: _____

B. William Baumeister
Primary Examiner
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DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 1/22/2004 have been fully considered but they are not persuasive.

a. Applicant argues (1) that the claims require that the insulating layer have some positive carbon impurity level; but (2) that none of the prior art references disclose that the insulating film have a carbon, much less one that is less than the claimed concentration of 5×10^{19} (e.g., claim 1) or 1×10^{18} (e.g., claim 4). The examiner continues to accept applicant's statement that the claims require some carbon to be present in the insulating layer, and therefore the claims are so limited to preclude reading on carbon-free insulating films. However, the argument that the prior art does not disclose such carbon-impurity-possessing insulating films is not persuasive for two reasons.

b. First, the examiner agrees that the portion of Zhang relied upon at col. 19, lines 60-, refers to the semiconductor layer as opposed to the insulating layer. Nonetheless this disclosure is relevant because Zhang further discloses that when the semiconductor film is obtained through plasma CVD, natural oxidation occurs at the surface (e.g., col. 10, lines 47-59). As such, this oxidized portion of the C:Si film includes C impurities. Since the Si film itself has a C concentration of 5×10^{18} , the carbon concentration in this region is necessarily below 5×10^{19} (per claim 1) and at some point in the thickness direction, the C concentration necessarily decreases to below 1×10^{18} (per claim 4).

c. Second, Zhang discloses that the halogen (F or Cl) may be included using various carrier gasses including CCl_4 or fleon [sic: Freon]: a fluorocarbon gas (e.g., col. 8, lines

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9-14). As such, when either of these carrier gases are employed the resulting insulating layer will necessarily also possess trace levels of C.

d. Accordingly, for either of these two reasons, the examiner maintains the previous position that the prior art discloses the presence of carbon impurities in the insulating film.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to B. William Baumeister whose telephone number is (571) 272-1722. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (571) 272-1664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**BRADLEY BAUMEISTER
PRIMARY EXAMINER**



B. William Baumeister
Primary Examiner
Art Unit 2815

August 17, 2004